



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P31665-P0		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/JP 03/12054	International filing date (day/month/year) 22.09.2003	Priority date (day/month/year) 30.09.2002	
International Patent Classification (IPC) or both national classification and IPC H04L29/06			
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 31.03.2004		Date of completion of this report 26.10.2004	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Günther, S Telephone No. +49 89 2399-6962 	

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1. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-34 as originally filed

Claims, Numbers

1-31 as originally filed

Drawings, Sheets

1/15-15/15 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-31
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-31
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: US-A1-2002103898

D2: "Midcom unaware NAT / Firewall Traversal", XP002266728

1.1. Notwithstanding the clarity issues (see 3.1-3.5.), the subject-matter of independent claims 1, 27, 29-31 of the present application can not be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

1.2. Document D1 discloses with regard to most of the features of claim 1 (the references in parentheses applying to this document):

A home terminal apparatus ("Networked Appliance", paragraph [0073]) for sending / receiving packet data ("messages", paragraph [0073]) to and from a router ("residential gateway in form of ... Network Address Translator (NAT)", paragraph [0073] and Fig. 3) that is connected to an external network ("wide area network 300", paragraph [0073] and Fig. 3) to which a server apparatus is connected ("external proxy 108", paragraph [0087] and Fig. 4), the home terminal apparatus being connected to the router via a home network ("home domain", paragraph [0073]), comprising:

- a packet generation unit operable to generate packet data to be sent to the server apparatus ("device ... IP capable", paragraph [0073];
- a protocol determination unit operable to determine a communication protocol used between the home terminal apparatus and the server apparatus ("request may be sent using UDP or TCP or SCTP transport", paragraph [0054]); and
- a communication unit ("SIP user agent", paragraph [0015]) operable to send / receive the packet data to and from the server apparatus via the router ("user agent client ... sends SIP requests ... user agent server ... accepts requests ... and sends back responses", paragraphs [0015-0016]),

wherein

- the protocol determination unit determines that the home terminal apparatus should communicate with the server apparatus using

- a first communication protocol ("UDP or TCP or SCTP", paragraph [0054]) when the communication unit sends address notification packet data ("REGISTER requests", paragraph [0019]) generated by the a packet generation unit to the server apparatus ("Registrar ... co-located with a Proxy", paragraph [0019]) periodically and repeatedly at a predetermined sending interval via the router, and
- a second communication protocol ("UDP or TCP or SCTP", paragraph [0054]) when the communication unit sends / receives control information ("method called DO", paragraphs [0051-0053]) to and from the server apparatus (see bidirectional message exchange (1)-(6) in the scenario shown in Fig. 12).

- 1.3. The subject-matter of claim 1 in the present application differs from the disclosure in document D1 in the adaptation to send address data periodically and repeatedly at a predetermined sending interval.
- 1.4. The objective technical problem to be solved by the invention is to **prevent a need for additional SIP proxy functionality inside the RGW.**
- 1.5. Starting from the disclosure in D1, the skilled person will look for alternative arrangements in which SIP messages traverse NATs. Knowing very well that both SIP and NAT are standardised at the Internet Engineering Task Force (IETF), and that the IETF working group "midcom" primarily focuses on the application of middle box architectures, he will immediately find D2. By now simply enhancing said home terminal apparatus of D1 by the additional SIP "PING" feature of D2 (page 8, lines 3-11; page 12, lines 6-20), the skilled person will arrive at the subject-matter of claim 1 without involving any inventive activity.
- 1.6. Independent apparatus claim 27 includes all the features of apparatus claim 1 and, furthermore, some additional features. However, document D1 also discloses according to all these additional features:
- the server apparatus includes a second communication unit operable to send / receive packet data ("proxy server ... acts as both a server and a client for ... for making requests", paragraph [0017])
 - the server apparatus includes a second packet generation unit operable to generate packet data to be sent to the home terminal apparatus ("in an internet context, the proxy server receives ... sends ...", paragraph [0017]).

For this reason, the arguments stated above with regard to claim 1 are also valid for claim 27. Therefore, claim 27 does also not fulfil the requirements of Article 33(3) PCT.

- 1.7. Independent claim 29 relates to a method, which entirely corresponds to the non-inventive subject-matter of apparatus claim 27.
- 1.8. Independent claims 30-31 relate to computer software products, which entirely correspond to the non-inventive subject-matter of method claim 29.
2. The additional features of the dependent claims do not add anything inventive to the independent claims because the features are either known from the above cited prior art (UDP, TCP, connection requests, management units, authentication, encryption, control unit, control requests, notification packets, control data, information storage, extracting address information) or are common measures (destroying packets, SSL, a plurality of apparatuses and units, server identifier, port number, URL, address lists, update address data, direct connection between router and external networks).
- 3.1. The wording of independent claims 30, 31 is a statement of results to be achieved without mentioning any program features leading to these results, Article 6 PCT.
- 3.2. Some of the features in the apparatus claims 1, 2, 4-8, 12-20, 22-24, 27, 28 relate to a method of using the apparatus ("determines, sends, receives, generates, performs, destroys, controls, extracted, stores") rather than clearly defining the apparatus features, Article 6 PCT.
- 3.3. Dependent claims 11 and 12 attempt to define the subject-matter "control unit" in terms of the result to be achieved ("control the apparatus according to control information") without mentioning the necessary technical features, Article 6 PCT.
- 3.4. In claim 26, the feature "not via an internet service provider" which may be interpreted to exclude a functionality what is not claimed, hereby resulting in a lack of clarity, Article 6 PCT.
- 3.5. The term "using" / "uses" (claims 1, 2, 5, 6, 7, 10, 19, 20, 21, 27, 28, 29) is vague and leaves the reader in doubt as to the meaning of the technical features to

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which it refers, Article 6 PCT.

- 3.6. Independent claims 1, 27, 29-31 are not in the two-part form, Rule 6.3(b) PCT.
- 3.7. The features of the independent claims are not provided with reference signs, Rule 6.2(b) PCT.
- 3.8. The relevant background art disclosed in D1 and D2 is not mentioned in the description, nor are these documents identified therein, Rule 5.1(a)(ii) PCT, but the description includes the expression "incorporated ... by reference" (see PCT Guidelines C-II, 4.18).